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Balazs Szviatovszki

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EXAMINER

WAHBA, ANDREW W

ART UNIT

PAPER NUMBER

2661

DATE MAILED: 02/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/877,206

Applicant(s)

SZVIATOVVSZKI ET AL.

Examiner

Andrew W Wahba

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 June 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-72 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-63 and 65-72 is/are rejected.
- 7) ☒ Claim(s) 64 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11/08/2002.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 72 objected to because of the following informalities: claim 72 depends from claim 72. Appropriate correction is required.

Specification

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

3. The abstract of the disclosure is objected to because it exceeds 150 words. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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5. Claims 1-34, 55 and 65 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With regard to claim 1, the applicant claims "a method for determining a new path that accounts for priority" (lines 1-2); the applicant, however, does not recite any steps.

With regard to claim 12, the applicant claims "a method for selecting a new path that accounts for preemption" (lines 1-2); the applicant, however, does not recite any steps.

With regard to claim 28, the applicant claims "a method that reduces or minimizes a preemptive effect" (lines 1-2); the applicant, however, does not recite any steps.

With regard to claims 19, the term "affected priority level" is not understood. The relationship between an "affected priority level" (claim 19) and the "new path" (claim 12) or "established path" (claim 12) is not clear. Claims 55 and 65 have a similar problem

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

- (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or
- (2) a patent granted on an application for patent by another filed in the United States before

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the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-5 and 9-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Hsu (US Patent 6,363,319). Hsu discloses a constraint based route selection that supports multi-protocol label switching, MPLS, label switch paths through explicit routing.

With regard to claim 1, Hsu discloses a technique that selects (determining) a route (new path) that minimizes the cumulative cost bias. The objective of the bias factor is to make congested links (established paths) less desirable for new flows (new path). Furthermore, this sensitivity to link congestion is greater for lower priority classes (accounts for priority), so that lower priority flows with less costly alternate paths will avoid these congested links for high priority flows (column 3, lines 20-28).

With regard to claims 2 and 3, the technique relates to applications where the constraints associated with a flow (new path) include a bandwidth requirement (resource requirement) and a priority (priority level) (column 2, line 66 – column 3, line 4).

With regard claim 4, the technique relates to applications where the constraints associated with a flow include a bandwidth requirement and a priority (priority level information) (column 2, line 66 – column 3, line 4). The technique is implemented by central server 110 with a biased cost route selector (analyzing) as illustrated by Figure 1A (column 3, lines 38-40).

With regard to claim 5, the technique selects (selecting) a route (new path) that minimizes (minimal impact) the cumulative cost bias. The objective of the bias factor is to make congested links (established paths) less desirable for new flows. Furthermore, this sensitivity to link congestion is greater for lower priority classes (using priority level information), so that lower priority flows (priority level lower) with less costly alternate paths will avoid these congested links for high priority flows (column 3, lines 20-28).

With regard to claim 9, preemption is when a router selector (selecting) preempts a LSP (established path) of lower priority (lowest priority level) from a congested link to re-allocate bandwidth to the new LSP (new path) (column 1, lines 18-21):

With regard to claim 10 and 11, preemption is when a router selector (selecting) preempts a LSP (established path) of lower priority (lowest priority level) from a congested link to re-allocate bandwidth (a least amount of reserved resources / preserves largest amount) to the new LSP (new path) (column 1, lines 18-21).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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9. Claims 6-8, 12-25, 28-35, 41-63, and 65-72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hsu (US Patent 6,363,319) in view of Cao et al, hereinafter "Cao" (US Patent 6,721,269).

With regard to claim 6, Hsu further discloses a setup priority that represents a LSP's availability and a holding priority in MPLS that represents an LSP's resilience to being preempted (preempted) (column 7, lines 12-14 and 16-21).

Hsu, however, does not expressly teach taking into account which or how many priority levels of established paths would be preempted.

Cao discloses that setup and holding priorities may be employed to rank paths and to thereby determine whether (which or how many) a new path may preempt (would be preempted) an existing path (column 8, lines 48-51).

A person of ordinary skill in the art would have been motivated to employ Cao in Hsu in order to establish a plurality of explicitly routed paths between source and sink routers (Cao, column 2, lines 8-12). At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to which the invention pertains to combine Hsu with Cao (collectively "Hsu-Cao") to obtain the invention as specified in claim 6.

With regard to claim 7 and 8, Hsu discloses constraint-based routed label switched paths in which an open shortest path first (shortest path) router LSA is associated with each link (column 5, lines 40-46). The technique relates to applications where the constraints associated with a flow (new path) include a bandwidth requirement (requisite bandwidth) and a priority (requisite priority)

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(column 2, line 66 – column 3, line 4). Cao discloses that setup and holding priorities may be employed to rank (least / reduces) paths and to thereby determine whether new path may preempt (preemptive effect) an existing path (established paths) (column 8, lines 48-51). It would have been obvious to combine Cao and Hsu for the same reason stated regarding claim 6.

With regard to claim 12, Hsu discloses a technique of route selection between a source *s* and destination *d* with a bandwidth requirement *B*. Hsu further discloses a setup priority that represents a LSP's availability and a holding priority in MPLS that represents an LSP's resilience to being preempted (accounts for preemption) (column 7, lines 12-14 and 16-21).

Hsu, however, does not expressly teach the manner in which the holding priority (accounts for preemption) is employed, and states that route placement does not explicitly account for the use of the holding priority (column 6, lines 24-26).

Cao discloses that setup and holding priorities may be employed to rank paths and to thereby determine whether a new path may preempt (accounts for preemption) an existing path (established path) (column 8, lines 48-51).

A person of ordinary skill in the art would have been motivated to employ Cao in Hsu in order to establish a plurality of explicitly routed paths between source and sink routers (Cao, column 2, lines 8-12). At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to which the invention pertains to combine Hsu with Cao (collectively "Hsu-Cao") to obtain the invention as specified in claim 12.

With regard to claim 13, Hsu discloses a technique of route selection includes a holding priority (one or more parameters) in MPLS that represents an LSP's resilience to being preempted (preemption) (column 7, lines 12-14 and 20-21). Cao discloses that setup and holding priorities (one or more parameters) may be employed to rank paths and to thereby determine whether a new path may preempt (preemption) an existing path (column 8, lines 48-51).

With regard to claims 14 and 15, Hsu discloses a technique of route selection between a source and destination with a bandwidth requirement (maximum bandwidth / maximum reservable bandwidth) (column 7, lines 12-14).

With regard claim 16, Hsu discloses a technique that relates to applications where the constraints associated with a flow include a bandwidth requirement (available bandwidth) and a priority (multiple priority levels) (column 2, line 66 – column 3, line 4).

With regard claims 17, 18 and 21, Cao discloses that setup and holding priorities may be employed to rank paths (minimal number of preempted priority levels / minimal preempted bandwidth) and to thereby determine whether a new path may preempt an existing path (column 8, lines 48-51).

With regard to claim 19, preemption is when a router selector (selecting) preempts a LSP of lower priority from a congested link to re-allocate bandwidth (minimal bandwidth) to the new LSP (path) (column 1; lines 18-21).

With regard to claim 20, the objective of the bias factor is to make congested links less desirable for new flows. Furthermore, this sensitivity to link congestion is greater for lower priority classes, so that lower priority (lowest

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priority) flows with less costly alternate paths will avoid these congested links (maximizes unreserved bandwidth) for high priority flows (column 3, lines 20-28).

With regard to claim 22, Hsu discloses that the intent is to keep high priority flows on their direct path (shortest path) and low priority flows on longer alternate paths if necessary (column 3, lines 28-30). Hsu discloses constraint-based routed label switched paths in which an open shortest path first (shortest path) router LSA is associated with each link (column 5, lines 40-46).

With regard to claim 23, the technique of route selection between a source and destination with a bandwidth requirement and a holding priority in MPLS (MPLS) that represents an LSP's (LSP) resilience to being preempted (column 7, lines 12-14 and 20-21).

With regard to claims 24, Hsu discloses a computer system 101 (LSR) that includes a system memory 150 as illustrated by Figure 1D (column 4, lines 18-23). The system memory 150 includes program 150, data 154, and biased cost route selector 115. The data 154 may contain databases (database) such as resource attribute, link state, other routing protocol databases, and others (link attributes) (column 4, lines 38-45).

With regard to claim 25, Cao discloses TCP/IP networks (Internet gateway protocol (IGP) extensions) (column 4, line 26).

With regard to claim 28, Hsu discloses a technique that selects (selecting) a route (new path) that minimizes (reduces or minimizes) the cumulative cost bias. The objective of the bias factor is to make congested links (established paths) less desirable for new flows (new path) (column 3, lines 20-28). Hsu

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further discloses a setup priority that represents a LSP's availability and a holding priority in MPLS that represents an LSP's resilience to being preempted (preemption) (column 7, 16-21).

Hsu, however, does not expressly teach the manner in which the holding priority (preemption) is employed, and states that route placement does not explicitly account for the use of the holding priority (column 6, lines 24-26).

Cao discloses that setup and holding priorities may be employed to rank (reduces or minimizes) paths and to thereby determine whether a new path may preempt an existing path (established path) (column 8, lines 48-51).

A person of ordinary skill in the art would have been motivated to employ Cao in Hsu in order to establish a plurality of explicitly routed paths between source and sink routers (Cao, column 2, lines 8-12). At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to which the invention pertains to combine Hsu with Coa (collectively "Hsu-Coa") to obtain the invention as specified in claim 28.

With regard to claim 29, 30 and 31, the technique relates to applications where the constraints associated with a flow (new path) include a bandwidth requirement (resource requirement / bandwidth reservations / available bandwidth) and a priority (priority level) (column 2, line 66 – column 3, line 4). Therefore, in the event that the bandwidth requirement is not available (insufficient resources), a new path cannot be established (eliminating).

With regard to claim 32, Hsu discloses that the technique selects a route with sufficient bandwidth that minimizes the cumulative biased cost (least cost paths) (column 3, lines 20-22).

With regard to claim 33 and 34, Cao discloses that setup and holding priorities may be employed to rank paths and to thereby determine whether a new path may preempt an existing path (determining ... which ... will be affected) (column 8, lines 48-51).

With regard to claim 35, Hsu discloses constraint-based routed label switched paths in which an open shortest path first (CSPF) router LSA is associated with each link (column 5, lines 40-46).

With regard to claim 41, 43, 45 and 46, Hsu further discloses a setup priority that represents a LSP's availability and a holding priority in MPLS that represents an LSP's resilience to being preempted (preempted) (column 7, 16-21).

Hsu, however, does not expressly teach the manner in which the holding priority (preempted) is employed, and states that route placement does not explicitly account for the use of the holding priority (column 6, lines 24-26).

Cao discloses that setup and holding priorities may be employed to rank (reduces or minimizes / a least amount / preserves a largest amount) paths and to thereby determine whether (which or how many) a new path may preempt (preempted) an existing path (column 8, lines 48-51).

A person of ordinary skill in the art would have been motivated to employ Cao in Hsu in order to establish a plurality of explicitly routed paths between

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source and sink routers (Cao, column 2, lines 8-12). At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to which the invention pertains to combine Hsu with Coa (collectively "Hsu-Coa") to obtain the invention as specified in claim 41, 43, 45 and 46.

With regard to claim 42, the technique relates to applications where the constraints associated with a flow include a bandwidth requirement (requisite bandwidth) and a priority (column 2, line 66 – column 3, line 4). Hsu further discloses constraint-based routed label switched paths in which an open shortest path first (shortest path) router LSA is associated with each link (column 5, lines 40-46). Cao discloses that setup and holding priorities may be employed to rank (reduces or minimizes) paths and to thereby determine whether a new path may preempt (preempted) an existing path (column 8, lines 48-51). It would have been obvious to combine Cao and Hsu for the same reason stated regarding claim 41.

With regard to claim 44, Cao discloses that setup and holding priorities may be employed to rank (preempts lowest priority level) paths and to thereby determine whether a new path may preempt (preempts) an existing path (column 8, lines 48-51). It would have been obvious to combine Cao and Hsu for the same reason stated regarding claim 41

With regard to claim 47, Hsu discloses a computer system 101 that includes a system memory 150 as illustrated by Figure 1D (column 4, lines 18-23). The system memory 150 includes program 150, data 154, and biased cost route selector 115 (path selection circuitry). The data 154 may contain

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databases (database) such as resource attribute, link state, other routing protocol databases, and others (column 4, lines 38-45). Hsu discloses a setup priority that represents a LSP's availability and a holding priority in MPLS that represents an LSP's resilience to being preempted (preemption information) (column 7, lines 12-14 and 16-21).

Hsu does not expressly disclose preemption information associated with the data network links stored in a database. As Hsu expressly discloses a database for resource attributes, it would have been obvious to one of ordinary skill in the art to which the invention pertains to include a database to store the holding priority (preemption information) as one of the other databases disclosed by Hsu.

Hsu does not expressly teach the manner in which the holding priority (preemption information) is employed. Cao discloses that setup and holding priorities may be employed to rank paths and to thereby determine whether a new path may preempt an existing path (column 8, lines 48-51).

A person of ordinary skill in the art would have been motivated to employ Cao in Hsu in order to establish a plurality of explicitly routed paths between source and sink routers (Cao, column 2, lines 8-12). At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to which the invention pertains to combine Hsu with Cao (collectively "Hsu-Cao") to obtain the invention as specified in claim 47.

With regard to claim 48, Hsu discloses a computer system 101 that includes a system memory 150 as illustrated by Figure 1D (column 4, lines 18-

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23). The system memory 150 includes program 150, data 154, and biased cost route selector 115 (path selection circuitry). The data 154 may contain databases (database) such as resource attribute, link state, other routing protocol databases, and others (column 4, lines 38-45).

With regard to claim 49, as Hsu expressly discloses a database for resource attributes, it would have been obvious to one of ordinary skill in the art to which the invention pertains to include a database to store the holding priority (preemption information) as one of the other databases discloses by Hsu (column 7, 16-21).

With regard to claim 50, 51 and 52, the data 154 may contain databases such as resource attribute (bandwidth / maximum reservable bandwidth / available bandwidth), link state, other routing protocol databases, and others (column 4, lines 38-45).

With regard claims 53, 54 and 57, Cao discloses that setup and holding priorities may be employed to rank paths (reduces a number of preempted priority levels / reduces a total amount of preempted bandwidth / minimizes a number of preempted priority levels) and to thereby determine whether a new path may preempt an existing path (column 8, lines 48-51).

With regard to claim 55 and 56, Cao discloses that setup and holding priorities may be employed to rank paths and to thereby determine whether a new path may preempt an existing path (column 8, lines 48-51). Accordingly lower priority or affected paths are preempted first (reduces unreserved bandwidth at a lowest priority level).

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With regard to claim 58, Hsu discloses constraint-based routed label switched paths in which an open shortest path first (shortest path) router LSA is associated with each link (column 5, lines 40-46).

With regard to claim 59, Hsu discloses a technique of route (LSR) selection between a source and destination with a bandwidth requirement and a holding priority in MPLS (MPLS) that represents an LSP's (LSP) resilience to being preempted (column 7, lines 12-14 and 20-21).

With regard to claims 60 and 62, Hsu discloses a computer system 101 (LSR) that includes a system memory 150 as illustrated by Figure 1D (column 4, lines 18-23). The system memory 150 includes program 150, data 154, and biased cost route selector 115. The data 154 may contain databases (database) such as resource attribute, link state, other routing protocol databases, and others (link attributes) (column 4, lines 38-45).

With regard to claim 61, Cao discloses TCP/IP networks (Internet gateway protocol (IGP) extensions) (column 4, line 26).

With regard to claim 63, Hsu discloses constraint-based routed label switched paths in which an open shortest path first (shortest path) router LSA is associated with each link (column 5, lines 40-46).

With regard to claim 65, Cao discloses that setup and holding priorities may be employed to rank paths (minimize the bandwidth preempted) and to thereby determine whether a new path may preempt an existing path (column 8, lines 48-51).

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With regard to claim 66, Hsu discloses a computer system 101 that includes a system memory 150 as illustrated by Figure 1D (column 4, lines 18-23). The system memory 150 includes program 150, data 154, and biased cost route selector 115 (means for selecting). The data 154 may contain databases (means for storing) such as resource attribute, link state, other routing protocol databases, and others (attributes) (column 4, lines 38-45). Hsu discloses a setup priority that represents a LSP's availability and a holding priority in MPLS that represents an LSP's resilience to being preempted (preemptive effect) (column 7, lines 12-14 and 16-21). Hsu further discloses routers 120A (means for forwarding) (column 3, lines 41-43).

Hsu, however, does not expressly teach the manner in which the holding priority (preemptive effect) is employed, and states that route placement does not explicitly account for the use of the holding priority (column 6, lines 24-26).

Cao discloses that setup and holding priorities may be employed to rank (minimize) paths and to thereby determine whether a new path may preempt (preemptive effect) an existing path (column 8, lines 48-51).

A person of ordinary skill in the art would have been motivated to employ Cao in Hsu in order to establish a plurality of explicitly routed paths between source and sink routers (Cao, column 2, lines 8-12). At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to which the invention pertains to combine Hsu with Cao (collectively "Hsu-Cao") to obtain the invention as specified in claim 66.

With regard to claim 67 and 68, Hsu's technique relates to applications where the constraints associated with a flow (new path) include a bandwidth requirement (bandwidth / bandwidth reservations) and a priority (priority level) (column 2, line 66 – column 3, line 4).

With regard to claim 69, therefore, in the event that the bandwidth requirement is not available (insufficient resources), a new path cannot be established (eliminating).

With regard to claim 70, Hsu discloses that the technique selects a route with sufficient bandwidth that minimizes the cumulative biased cost (least cost paths) (column 3, lines 20-22).

With regard to claim 71, Cao discloses that setup and holding priorities may be employed to rank paths and to thereby determine whether a new path may preempt (which lower priority level or levels will be effected) an existing path (column 8, lines 48-51).

With regard to claim 72, Cao discloses that setup and holding priorities may be employed to rank paths and to thereby determine whether a new path may preempt (preempts lowest priority level) an existing path (column 8, lines 48-51).

10. Claims 36-40 rejected under 35 U.S.C. 103(a) as being unpatentable over Hsu (US Patent 6,363,319).

With regard to claim 36, Hsu discloses a computer system 101 that includes a system memory 150 as illustrated by Figure 1D (column 4, lines 18-

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23). The system memory 150 includes program 150, data 154, and biased cost route selector 115 (data processing circuitry). The data 154 may contain databases (database for storing attributes) such as resource attribute, link state, other routing protocol databases, and others (column 4, lines 38-45).

Hsu does not expressly disclose a database for storing priority level information.

Hsu's route selection technique relates to applications where the constraints associated with a flow include a bandwidth requirement (resource attribute) and a priority (priority level information) (column 2, line 66 – column 3, line 4). A person of ordinary skill in the art would have been motivated to include a database for storing priority level information so as to maintain the priority levels of data links, such information may then be employed to allocate more bandwidth to higher priority data links. As Hsu expressly discloses a database for resource attributes, it would have been obvious to one of ordinary skill in the art to which the invention pertains to include a database to store priority information as one of the other databases discloses by Hsu to obtain the invention specified by claim 36.

With regard to claim 37 and 38, the technique relates to applications where the constraints associated with a flow (new path) include a bandwidth requirement (resource requirement) and a priority (priority level) (column 2, line 66 – column 3, line 4).

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With regard to claim 39, the technique relates to applications where the constraints associated with a flow include a bandwidth requirement and a priority (priority level) (column 2, line 66 – column 3, line 4).

With regard to claim 40, Hsu discloses a technique that selects (selecting) a route (new path) that minimizes the cumulative cost bias. The objective of the bias factor is to make congested links (established paths) less desirable for new flows (new path). Furthermore, this sensitivity to link congestion is greater for lower priority classes (priority level lower), so that lower priority flows with less costly alternate paths will avoid these congested links for high priority flows (column 3, lines 20-28).

Allowable Subject Matter

11. Claim 64 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 26 and 27 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew W Wahba whose telephone number is (571) 272-3081. The examiner can normally be reached on M-F 8:30-5:30.

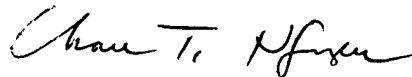
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on (571) 272-3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Respectfully Submitted,

Andrew Wahba *AW*
Patent Examiner
February 2, 2005



**CHAU NGUYEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600**